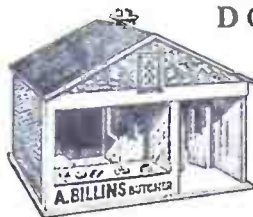


Hobbies

WEEKLY

DESIGN SHEET FOR A
DOLL'S
SHOP



FREE
INSIDE!
(See page
Six)

VOL. 114

NUMBER 2944

Two Sea Scouts, in their PBK14 canoe, enter the rapid at Boatside Weir on the River Wyre, during a 100-mile cruise from Glasbury to the Bristol Channel.



Full instructions for building YOUR OWN TWO- SEATER CANOE

Specially designed for 'Hobbies' by P. W. Blandford

CANOING is a grand sport. Any boy who is reasonably handy with tools can build a canvas-covered rigid decked canoe, at little cost, which will be capable of taking him on all waters—from streams of a few inches depth to rapid rivers, lakes and the open sea. The canoe described in this article was designed for use as a roomy single-seater, able to carry all you need for extensive touring, or as a two-seater when you have little kit. Its length is 14ft. 2ins., its beam 29ins., and it is intended to carry a normal load of 500lbs. Its weight is about 40lbs. Although this craft is intended primarily for paddling, sails can be used as auxiliary.

Canoes built to this design have

already been tested thoroughly on all kinds of water. This PBK14 canoe is a good rapid-river craft, and quite at home at sea—one has crossed the English Channel. The design is arranged so that there are no awkward joints to cut. Few tools are needed, and the job can be tackled confidently, even if no previous attempts have been made at boat building.

Choice of Timber

Almost any timber can be used, providing it is reasonably straight-grained and free from large knots. Softwood will be strong enough, but an attractive job will result from the use of mahogany or other hardwood. The cross-frames should be cut from resin-

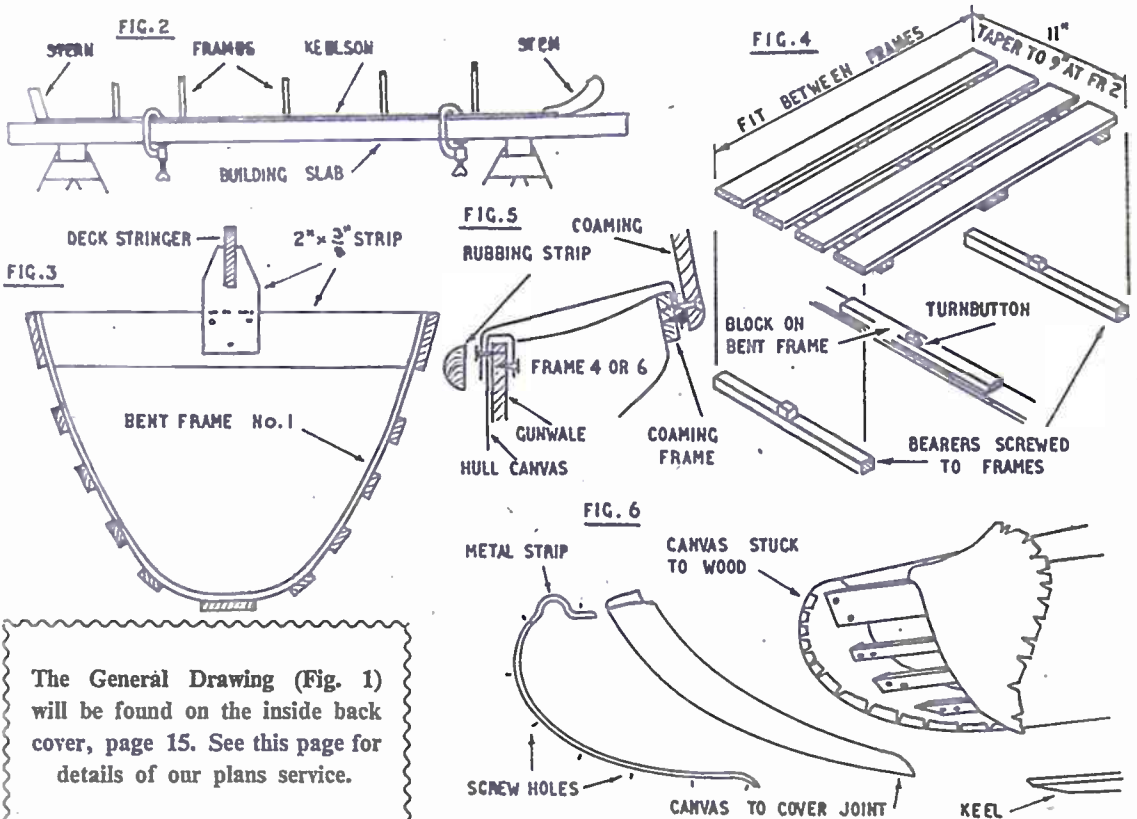
bonded plywood. Some timber yards know this as 'waterproof' or 'exterior' plywood. All joints are screwed, but it is best to also glue them, using one of the synthetic resin glues. The joints will then be stronger than the wood and fully waterproof. Owing to their limited 'shelf-life', synthetic resin glues are seldom stocked by ordinary stores, but can be readily obtained from Messrs. Croid, Imperial House, Kingsway, London, W.C.

Make the main frames first, using waterproof plywood, or building up by overlapping strips of 4ins. by 1/2in. section softwood (which may be packing case wood). As the truth of the finished hull depends on the accuracy of the

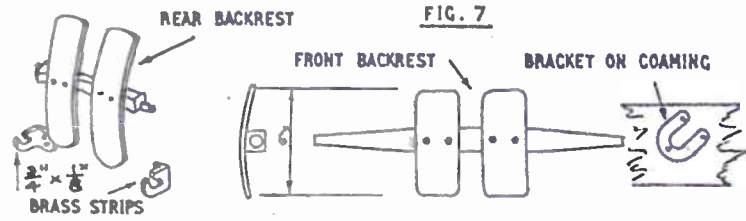
All correspondence should be addressed to The Editor, Hobbies Weekly, Dereham Norfolk.

THE MAGAZINE FOR MODELLERS,
HANDYMEN AND HOME CRAFTSMEN

4^p



The General Drawing (Fig. 1) will be found on the inside back cover, page 15. See this page for details of our plans service.



shapes of the frames, arrangements have been made to supply full-size drawings of them (see panel in this article). Both methods of construction are shown on the drawing, which may be laid out on the wood and traced through. Cut out with coping saw or stout fretsaw, and glass-paper the edges. Mark the position of stringers and fix bottom board bearers to the frames. Stem and stern posts are also shown on the full-size drawing. Use your straightest piece of 2ins. by 1/2in. strip for the keelson (A). Mark it out as on the General Drawing (Fig. 1), on page 15, and taper the ends as shown. Screw and glue the main frames and end posts to it. Set this up on a building

slab (any stout straight flat plank supported at a convenient height) either by cramping or screwing (Fig. 2). Stretch a string between the end posts and see that the whole assembly is straight and true. Fix the gunwales (B) next, starting at the centre and working a little each side at a time towards the end, gluing and screwing at each frame. Check that the distance between frames along the gunwales is the same at each side. At the stern, lap the strips over the stern post and cut off flush after screwing. At the stem, bevel the inner surfaces to fit against the stem post. Fit the coaming frame (C) and deck stringers (D and E). Fit the stringers (F)

next down to the gunwales at each side, in the same way as the gunwales, but with one screw at each crossing. At this

OUR PLANS SERVICE
PBK14
 A drawing showing the main frames and end posts full-size is available from the Editor, *Hobbies Weekly*, Dereham, Norfolk, price 7/6 post free. A drawing showing the construction of paddles, sailing gear and other accessories is also available price 2/-.
 The designer will answer technical queries, if a stamped addressed envelope is enclosed. The designer is the owner of the copyright in this design. Amateurs may build craft for their own use.

PBK11
 Similar drawings are still available for PBK11, the 11ft. single-seater canoe published in *March, 1950*. Drawing of main frames and end-posts, 6/- post free; drawing of accessories, 1/9 post free. For the benefit of new readers, constructional details, etc., reprinted from the original issue are supplied free of charge with all orders for PBK11 plans. The constructional details alone can be supplied for 6d. post free.

stage the framework may be taken off the building slab and turned over for convenience in fitting the other stringers (F). The bottom stringers will have to be twisted and held by a shifting spanner at each end while gluing and screwing.

Frames 1, 3, 5 and 7 are sprung into place and held by cramps at the gunwales while screws are put in at each crossing. At frame 1 put strips to support the deck stringer (Fig. 3). At the other bent frames fit struts between frame and coaming frame (see Fig. 1). Fix bottom-board bearers to the cockpit frames, and make the bottom boards (H) to fit between the frames (Fig. 4).

Clean up the framework with glass-paper, then paint or varnish it. If you have made a good job of the woodwork it will look smartest if given two or three coats of marine varnish.

The Skin

The skin is best made of proofed canvas of about 12oz. grade. If unproofed canvas is used it should be painted with a proofing solution before fixing to the canoe. Rubberized fabric is also suitable, except that some light grades—such as balloon fabric—are not sufficiently durable. If 42in. width

MATERIAL SCHEDULE

All straight-grained softwood or hardwood, unless marked otherwise.

Part	Name	No. off	Length	Width	Thickness
A	Keelson	1	13ft. 2ins.	2ins.	1/2in.
B	Gunwale	2	14ft. 6ins.	2ins.	1/2in.
C	Coaming frame	2	7ft. 0ins.	2ins.	1/2in.
D	Deck stringer	2	4ft. 0ins.	2ins.	1/2in.
E	Stringers	2	3ft. 6ins.	1in.	1/2in.
F	Bent frames	8	14ft. 6ins.	1in.	1/2in.
G	Bent frames	4	3ft. 6ins.	1 1/2ins.	1in., preferably ash
H	Bottom boards	12	2ft. 3ins.	2ins.	1/2in.
I	Keel	1	13ft. 6ins.	1in.	1in.
J	Bilge keels	2	7ft. 0ins.	1in.	1in.
K	Rubbing strips	2	14ft. 6ins.	1in.	1in. half-round
L	Cockpit coaming	2	7ft. 3ins.	3 1/2ins.	1in., preferably hardwood
M	Cockpit coaming	1	1ft. 4ins.	5ins.	1in., preferably hardwood
N	Backrests	4	7ins.	2ins.	1in. oak or ash
O	Backrests	1	1ft. 9ins.	1in.	1in. oak or ash
	Backrests	1	8ins.	1in.	1in. oak or ash
	Stem post	1	1ft. 9ins.	8ins.	1in. plywood
	Stern post	1	1ft. 0ins.	1 1/2ins.	1 1/2ins.

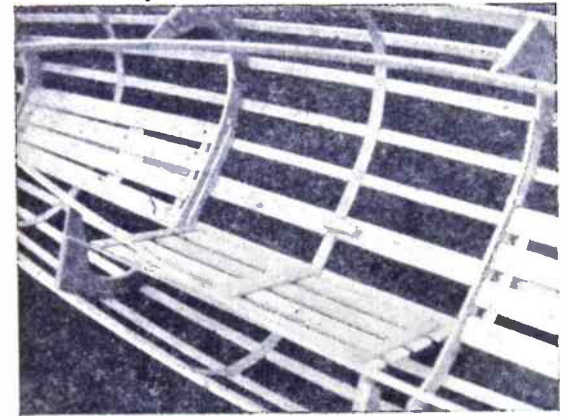
Main frames: resin bonded plywood, as drawing (1 piece 44ins. by 30ins. will cut the set).
 Canvas: 1 piece 15ft. by 42ins., 12oz. proofed, for the hull.
 1 piece 14ft. by 30ins., same or lighter grade for deck.
 Sundries: Approximately 2 gross 1/2in. by 6 countersunk brass screws.
 1 gross assorted 1/2in. to 1 1/2in. brass screws.
 2 quarts paint and varnish.
 1 lb. 1/2in. copper tacks.
 1 tube Bostik 252.

cannot be obtained, 36in. width may be made up by sewing strips each side at the widest part of the canoe.

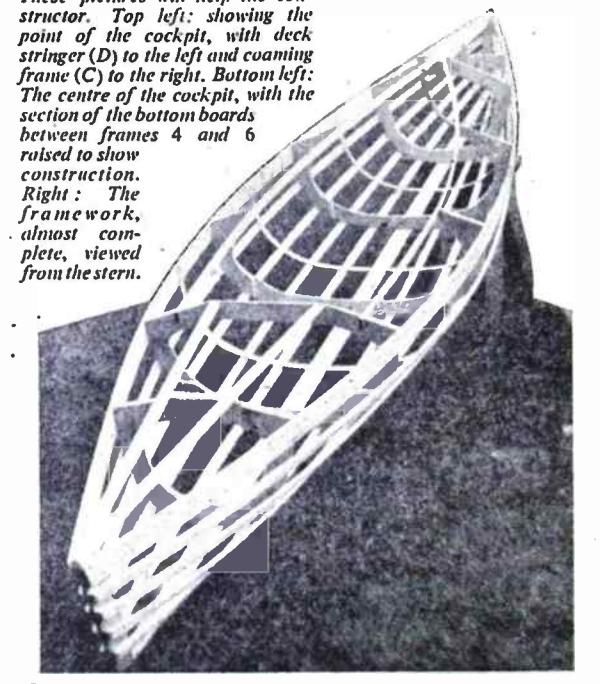
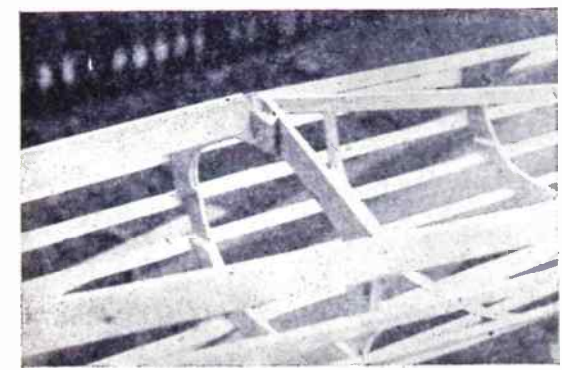
Draw a centre-line on the canvas and lay this over the up-turned framework. Use 1/2in. copper

tacks. Tack to one end post, then stretch and tack to the other, and put tacks along the keelson at about 6in. intervals. Turn the framework the right way up. Pull the canvas up and over the gunwale and tack inside (Fig. 5). Do about 1ft. at each side in turn, tacking at about 2in.

(Continued on page 11)



These pictures will help the constructor. Top left: showing the point of the cockpit, with deck stringer (D) to the left and coaming frame (C) to the right. Bottom left: The centre of the cockpit, with the section of the bottom boards between frames 4 and 6 rulsed to show construction. Right: The framework, almost complete, viewed from the stern.



Going Trout Fishing This Spring?

DESIGNING AND BUILDING MODEL RAILWAYS

By E. F. Carter

Never Glue

IT may be that at this stage many readers will desire to purchase some track and start to lay it, so here are a few timely words of advice.

In either 'OO' or 'O' gauge, broadly speaking, it does not much matter which of the many excellent commercial tracks you use, but under no circumstances should the varieties be mixed on one layout. Manufacturers have different methods of mounting the rail on to the sleepers in 'OO' gauge, whilst both rail depths and sleeper thicknesses vary very considerably, so when any attempt is made to match up the rail-ends, packing has to be resorted to, which can be a fruitful cause of endless running troubles.

Again, there are types of track in the smaller scale which depend almost entirely for their built-up strength by being glued into place on to a cork overlay, which latter is also glued to the baseboard. This system makes up into an extremely strong finished layout, but it is practically impossible to move the trackwork again, should it be desired to alter the layout design at any future date.

The writer remembers three gruelling days he once spent lifting the sidings on such a layout, so that they could be relaid to a sensible track plan, and even with expert care, the track was so badly mauled in the process that all but one of the turnouts had to be scrapped.

If a cork underlay is used, the best way of mounting the track is first to pin the underlay to the baseboard—using pins about 1/4 in. longer than the thickness of the cork, positioning the pins so that they will not be fouled by the sleeper-spikes of the track, when the latter comes to be fixed in place on top of the cork.

Should it be desired to alter any part of a layout laid in this way, it is only necessary to lift the track from the underlay, and then remove the latter from the baseboard. This can be done easily without damaging either track or underlay.

Never use any type of glue to fasten any part of trackwork into place, for any modification to 'stuck-down' track will almost always mean completely 'writing off' both the track and the corkwork.

Having decided on the general design of the layout and the placing of the stations, the next item to be planned is the individual track layout of each station; for here again, nothing is easier than to so arrange tracks that they produce an unworkable station layout.

In Fig. 4 is shown the plan of a simple-looking, but absolutely unwork-

able station goods yard, and it will be a good idea if the reasons for its uselessness are studied with a view to knowing what track conformations to avoid during planning.

able station goods yard, and it will be a

good idea if the reasons for its useless-

ness are studied with a view to knowing

what track conformations to avoid

during planning.

Let us imagine a South-bound train

(arriving from the left-hand side of the

diagram) desires to place a wagon or

two in the goods shed. It first draws

ahead to the end of the station platform

at (D), then backs over the crossover

(A-B); finally proceeding into the siding

through the turnout (C).

The engine is now trapped, as

there is no track provided by which it

can run round its train. Moreover, as it

is not permissible for an engine to enter

or to pass through a goods shed under

any circumstances, vehicles must be

propelled (pushed) into the shed in

every instance.

Similarly a Northbound train (coming

from the right-hand) will draw ahead

until the guard's brake van of the train

has passed the point (C), after which it

is backed into the siding. In this case it

is impossible to dispose of the brake van,

so once again things are unworkable.

Now consider Fig. 5. It will be

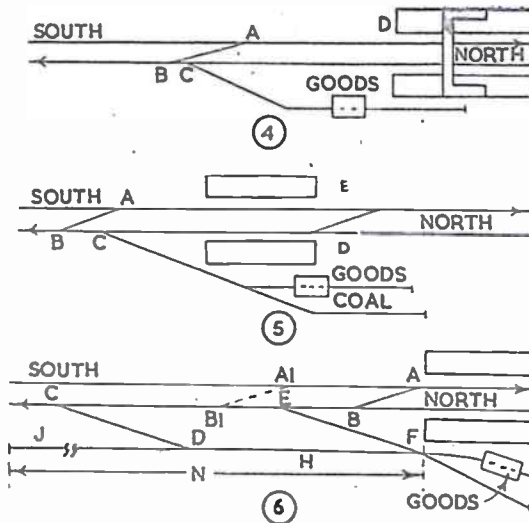
noticed that an extra crossover, com-

posed of two turnouts (D) and (E) has

been included at the South end of the

station, thus constituting a very com-

mon prototype layout for a small



operation, a Southbound goods train stops in the station with its brake-van clear of (A), where it is uncoupled. The engine then draws the remainder of the train forward until the last vehicle is clear of point (A), when the engine is uncoupled and taken forward beyond point (E). It is then reversed over the crossover (E-D), and on over (C) and (B). It then proceeds in a forward direction over (B-A), on to the rear end of its train. (The brake-van remaining clear of (A) during all these movements).

The train is then drawn back over (A-B), and then propelled over (B) and (C), pushing the wagons required into the goods shed or coal line, as required. Should there be empty wagons or vans to be picked up as well, these are marshalled into order before the incoming train is broken up, and are shunted on to the coal road and left there whilst the wagons or vans are being propelled into the shed road; after which the empties are drawn out of the sidings at the rear of the now shortened train.

After all the movements already given for entering the siding have been carried out 'in reverse', the brake-van is coupled up to the departing train, which can now proceed on its way.

In the case of a Northbound train, the brake-van is uncoupled and left, whilst the engine and wagons proceed ahead until clear of the points (C); after which they can enter the sidings as already explained.

Such a simple station yard layout as this needs only five turnouts and yet it is

(Continued on page 7)

IT is the wise angler who puts his house in order ready for the trout season, which begins in March on most rivers and brooks, though the opening date varies somewhat in the different fishery districts. March, though, is rather early, and it is much better to wait a little longer before venturing forth to the riverside, unless, of course, it happens to be an early spring. A spell of mild sunny weather in mid-March brings hatchings of flies on the waters, and trout leave the deeper holes and come forth on to the shallower runs and tails of pools in quest of insect life. At times they will rise freely round about noon on a springlike day in March. The following month, April, is one of the best months for trout-fishing.

Well, the time has come to take rod, line, reel, casts, flies and hooks, etc., out from their winter lair. Perhaps you have been putting off the day to get things put ship-shape, but now there is no time to lose.

Rod and Reel

Get that rod out of its bag, and examine it carefully—some anglers do this before storing it, but many do not. Does it need a coat of varnish? Maybe. Anyway, re-varnishing would not do it any harm. Unless the old varnish is badly chipped or flaked off showing the bare wood, varnishing is a straightforward job. Procure a small bottle of rod varnish from your tackle dealer. Wash off old grease, dirt and stains, and rinse the rod well. Dry it and then apply the varnish thinly with the tip of your forefinger. It does not require a brush for the task, and you will find that the varnish goes on more easily and evenly by using your finger.

Be sure to give the varnish plenty of time to get hard and set before handling the rod again. Hang it up in a dry airy dust-free room or the best place you can find, for some days. When re-varnishing a rod always remember that, if necessary, two thin coats evenly applied are better than one heavy and uneven coat.

If a rod is in a very bad condition, anyone with a stock of patience and some skill can make it like new by stripping it, and removing the rings carefully. Whippings can be cut away with a razor blade. Afterwards, scrape off all the old varnish with a piece of broken glass.

When the rod has been stropped and cleaned, apply a coating of linseed oil on a piece of rag, rubbing the wood briskly and working in the oil. Do not let oil

come in contact with the rod ferrules. This application of oil will give new 'life' to a rod.

Leave it for a little time to allow the oil to soak in the wood, then replace the rings, binding them on with fine silk thread. Do the whipping as neatly as you can, and give all the whippings a coat of shellac varnish. All intermediate whippings can be treated similarly. Leave to dry and then go over the whole rod with the varnish, applied as directed earlier.

The reel is not much trouble to keep right. The ordinary plain fly-reel is not a complicated piece of machinery; there is nothing to go wrong. But, it does require taking to pieces—a simple matter—and thoroughly cleaning of dust and clotted oil—if any. Then, having wiped it well with a soft rag, assemble it again and give just a few spots of oil to the spindle.

Lines and Casts

Dressed fly-lines should be inspected, and rubbed down with a little deer's fat or other preparation sold by tackleists for the purpose.

If you have a line that has become 'tacky', it is possible to remove the old dressing by soaking the line in methylated spirits for about twelve hours, clearing away the sediment, and soaking again. Afterwards wash the line in good warm soapy water a few times, rinse well in clean warm water and then hang it up to dry.

When the line is thoroughly dry rub it down with any really effective line grease, working the stuff in well. Some anglers use linseed oil, but this takes up such a lot of time in drying. After you have treated the line to your satisfaction, hang it up in loose loops or coils in a dry airy place for a time, before rewinding it on to the reel.

Casts—weed them out carefully. Throw away all doubtful stuff. Better to be 'sure' than sorry. There used to be an old saying that 'Last season's casts should be with last season's fishing!' This is not necessarily true, for it is possible to keep the modern nylon and other gut-substitutes for two or even

three seasons. But whilst you are about your sorting out, be sure and thoroughly test all casts, points, loose coils, short lengths, traces—in short anything of gut or synthetic gut. Any that show signs of fraying must be regarded as doubtful, and discarded. But where fraying is near a knot, cut out the frayed bits and retie the knot. This may give a cast a new lease of life.

Flies and Hooks

Sift your flies, and pick out a good selection to commence the season with. Here are a useful trio for spring fishing—Black Spider, Hackle March Brown, Greenwell's Glory. You can augment these by Blue Dun, Hare's Ear, Partridge Hackle, and Pheasant Tail.

Used flies should be carefully examined. The hooks especially must be scrutinised, and blunt points touched up with a small file to make sure they are quick penetrating. If a barb of a hook is broken off, throw the fly away. Weed out all doubtful flies and discard them.

Other Items

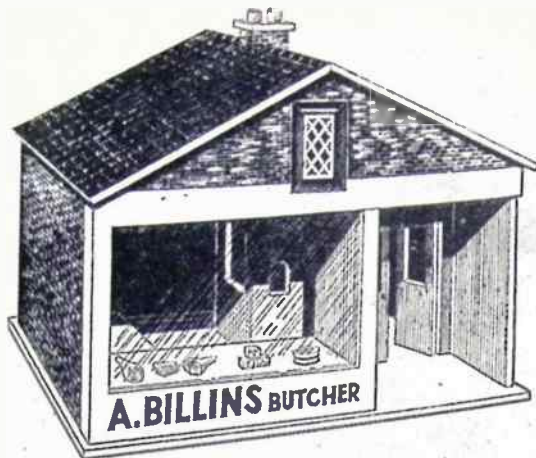
Is your landing-net in order? No tears, no rotten meshes? Mend any places where the netting looks weak. If the whole net is getting the worse for wear, replace it. Nothing is worse 'luck' than to lose a fish—a big one—owing to a landing-net giving way in the bottom meshes and letting the catch slip through. Nets can be preserved by soaking in linseed oil, hanging them up to dry afterwards.

Worn fishing bags can be patched with waterproof canvas or similar material. Waders, if needing patching, can be mended with rubber or canvas patches well solutioned down over the tear with thick rubber solution. Afterwards place the treated garments on the floor and put a weight on top—two or three biggish books will serve—until the patch is set hard.

Look through the rest of your outfit, and replace any thing that is no good. A fresh start for the new season usually pays rewards. (346)

This is the first issue of a new volume. Indices for Vol. 113 are being prepared, and will be available shortly, price 1/- each, post free.

Making a sturdy toy DOLL'S SHOP



Design No. 2944, presented free with this issue. Complete kit comprising wood, metal chimney and window, transparent window material, hinges, screws, and brick and tile paper, from any Hobbies Branch or post free from Hobbies Ltd., Dereham, Norfolk, price 37/3 including tax.

'PLAYING shops' is always a popular pastime with children, and one which will keep them occupied for hours on end. Usually, they have to make do with a makeshift set-up in lieu of a shop, and those who possess anything resembling the article illustrated regard themselves as extremely lucky.

Roomy and Strong

Yet it is not too expensive to provide children with one of these playthings, and the task is well within the capabilities of the average home handyman. The shop illustrated is roomy and strong. Once made, it will last indefinitely, and is of educational value as well as being a grand toy.

Overall it measures 15ins. long, 10½ins. wide and 13½ins. high. In the illustration, it is shown as a butcher's shop, but this, of course, is optional and grocer's provisions or other com-

modities could easily be substituted. By leaving the front window out, for instance, the shop could quite easily be converted to a fishmonger's.

The building is complete with swing doors, counter and pay desk, and the counter and pay desk are separate units so that they can be used outside the shop if the children so desire. Also, the back of the shop can be completely removed while in use, allowing plenty of room for small hands to manipulate the 'goods'.

Those purchasing the complete kit will be supplied with all necessary wood, a metal window which adorns the upper front of the shop, chimney, brick and tile paper, and transparent celluloid material for the main shop window, door windows, etc.

As nearly as possible the parts are numbered in the order of assembly.

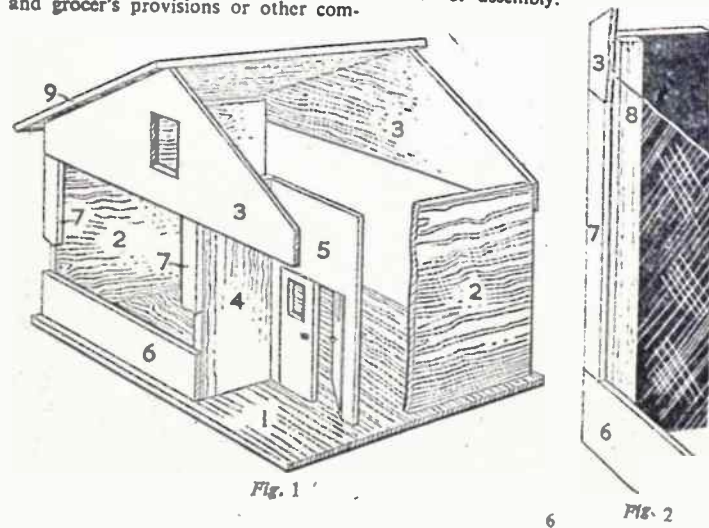


Fig. 1



Fig. 2

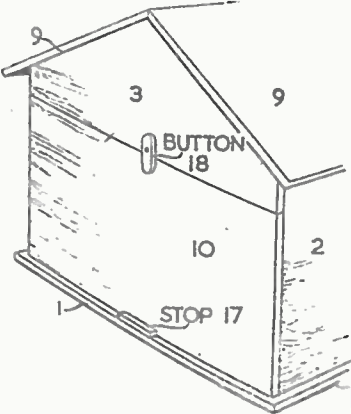


Fig. 3

Commence construction by cutting the base (1), the two sides (2) and the two roof supports (3). Note that only one of the roof supports has a rectangle cut in it where the metal window will subsequently be placed.

Glue and pin the two sides and roof supports together, and then fix the whole assembly on to the baseboard equidistant between the front and back. Reference to Fig. 1, where one side is shown cut away, will make this clear.

Porch and Doorway

Next, cut pieces (4) and (5), which form the porch and doorway. In cutting piece (5), first remove the window in each door and then cut out the doors. Then hinge the doors back on again with the small hinges supplied, and fix small pieces of the transparent material behind the window openings with glue and small pins. Two small roundhead screws are placed one in each door to serve as handles.

When the door assembly is complete, glue and pin pieces (4) and (5) together, and then fix them firmly to the main structure so far completed. Glue and small fret screws will make a firm job of this assembly.

Piece (6), which forms the frontage of the shop, and the narrow pieces (7), are now cut and secured in place (see Fig. 1). Now put a large piece of the celluloid material behind the shop front, cut the two strips (8) and glue and pin them in position as seen in Fig. 2, thus holding the transparent material firm. Small pins can also be used where convenient to make a really firm job.

Before proceeding further with construction, paint the inside of the shop.

Two coats of white or cream can be used according to the choice of the worker.

The next step is to put on the roof, which comprises the two pieces (9) which are chamfered to fit at the ridge. This chamfering can best be done with a small plane. When they are a nice fit, glue and pin them securely in position.

The back (10) is cut next, and is a rectangular piece 14½ins. long by 7ins. wide. It is not fixed to the main frame in any way but is held in position, when the shop is closed, by a stop (17) glued to the base, and a button (18) screwed to the back roof support as seen in Fig. 3. When the back is put in position and the button turned, it will be found quite secure.

The main shop has now been completed, and attention can be turned to making the accessories. First make the counter from the two pieces (11) and one piece (12), which are glued and pinned together as shown in Fig. 4. It is then ready to stand in position. The three pieces (13) are next cut and these, when assembled, represent a butcher's chopping block, or, in the event of some other sort of shop having been decided upon, an auxiliary counter. The pieces are assembled in the same way as the large counter (Fig. 4).

Now make the pay desk. This is constructed from the two pieces (14) and the pieces (15) and (16). They are glued and pinned together as in Fig. 5, and transparent material can be used behind the window if desired. The celluloid, if used, must be fixed in place before assembly.

The whole project can now be painted and finished. It might be as well to paint the pay desk and counters first so that they can be stood aside to dry while work proceeds with the rest of the building. White or cream would suit, although some workers may prefer a stained and polished effect,

particularly if they have chosen to make their shop a grocer's.

For the main building, the illustration is a fair guide to the decoration. Paint the front and facade, together with the interior of the doorway, cream, and the part of the base projecting from the main building, and possibly the roof

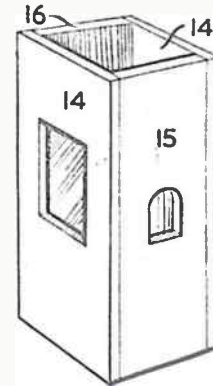


Fig. 5

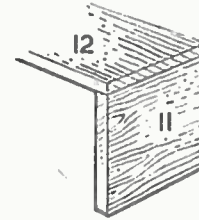


Fig. 4

edges, might also be painted a similar colour.

Papering

When the paint is dry, the work of papering the remainder of the shop can be tackled. The sides, back and upper portion of the front roof support are decorated with brick paper. Use a good quality paste, avoid wrinkles and make sure that the paper adheres firmly. Now apply the tile paper to the roof in a similar way. The ridge tiles can be represented by cutting a strip of the tile paper about 1in. wide and pasting it along the ridge with its under-surface uppermost. This will give you a plain coloured strip along the ridge, and the tiles can then be shown by pencil lines

drawn across it. The finished effect of this work can be seen in the illustration.

For those who can letter well, the name and occupation of the 'shop-keeper' will present no difficulty, and, of course, any name chosen can be used. Others may care to use a suitable name cut from a magazine or similar, and glued into place on the shop front. Again, single letters can be cut from magazines and a name built up. For the competent fretworker who wants his shop to have a modern appearance, a name cut from fretwood and stuck in position should be easy enough.

Now pin the metal window in place, and fit the chimney as shown in the instruction leaflet supplied with each unit. Fixing is a simple matter of making two sawcuts in the roof and slotting the chimney into place.

If the worker has decided on a butcher's shop, proceed now with making the 'legs of mutton', etc., suggestions for which are given on the design sheet. Pictures of joints, etc., can also be taken from magazines, pasted on wood and cut out with the fretsaw. The

worker might also find suitably sized coloured advertisements for such commodities as Atora suet, Oxo, and the other commodities often seen in a butcher's shop. With a little perseverance they might even find a picture of a butcher, and this could be similarly pasted up and cut out for use in the shop.

Those who are making their shop a grocer's or some other alternative, can proceed similarly in building up their stock from magazine advertisements, etc. Tinned food, etc., can be easily represented by cutting short lengths of various sized dowels and painting the bright colours usually associated with labels.

DESIGNING MODEL RAILWAYS

(Continued from page 4)

quite workable, though, of course, both main-lines are blocked during shunting operations, so the plan is only good for small stations where the passing passenger traffic is not very intense. In practice such shunting movements are carried out late at night, or in the small hours of the morning, when the passenger service is at its lowest ebb.

To obviate this continued blocking of the main-lines, it is usual to add one more turnout, and to so produce a 'shunting neck' (N, Fig. 6), which should be made two engine-lengths longer than the longest goods train which will be required to enter the goods yard. Crossover (A-B, Fig. 5) is reversed and placed at (C-D, Fig. 6). Point (C, Fig. 5) becomes (E on Fig. 6),

and the new turnout is placed at (F).

In operation, a Southbound train arrives and draws ahead clear of (A). It is then backed down the other main-line until the engine is clear of (C), when engine and train draw ahead over (C) and (D) into the shunting neck (N), with the brake-van clear of (D). The brake is then propelled up to the buffers on line (J), and is left there. The remainder of the train is then drawn forward clear of (D), when the engine is uncoupled and run round its train via (F-E) and (C-D); after which the sidings are worked in the aforementioned manner without further interference with the main-lines.

After all the yard work is completed, the guard's van is picked up, and the

train replaced at (H), where it remains until a gap in the main-line passenger service permits it to draw out on to the main-line and to cross over on to the Southbound road to proceed on its way.

From these simple examples it will be seen how few turnouts are actually needed to produce an interesting and operable station layout, always providing—of course—that the turnouts are properly used, both in respect of their location and their distance apart. For example, the layout of Fig. 6 would be utterly useless if the distance (N) was made too short, though the crossover (A-B) could, if desired be moved to (A1-B1, shown dotted) without upsetting the working arrangements. Obviously, if only a single-track main-line is being used, crossover (A-B) will not be needed, thus effecting a saving of two turnouts. (333)

Step-by-step instructions for a BEGINNER'S ONE-VALVE RADIO

CONSTRUCTORS who have built the crystal set recently described, will probably be considering the possibility of making a one valve set. If so, they should find that described here perfectly straightforward, and be able to obtain good results at once. A one valve receiver is more powerful and sensitive than a crystal set, so that more volume is obtained from nearby stations, while more distant stations, not audible with the crystal set, will be received.

All the parts in the crystal set, with the exception of the crystal detector itself, can be made use of, though it will be necessary to add a further winding to the coil, or completely rewind this item as will be explained. Some extra parts will be necessary, the first being another small on-off switch to switch the set on

taken directly to the various terminals and parts, if left a few inches long. The other leads may be of any wire to hand, though insulated connecting wire of about 20 to 22 S.W.G. is most convenient. For battery leads, lengths of flex are employed.

As the chassis type valve holder is easiest to obtain, this has been shown, but a baseboard type holder would do equally well. The chassis holder will need mounting on spacing pieces or blocks, as shown in Fig. 3, so that the sockets are slightly above the baseboard. Whatever type of holder is employed, remember that it is necessary that wiring to the sockets or tags be correctly carried out. In the diagrams (G) indicates Grid, (P) indicates Plate, and (F) indicates Filament connections to the valve. Some manufacturers place the fixing holes opposite the filament sockets, not opposite grid and plate sockets, as in Fig. 2. The plate socket is always that standing a little further from the other sockets.

All connections must be clean and tight. When wiring in the coil the enamel should be scraped away from the ends of the leads. If soldering is

necessary, this can be accomplished easily with cored solder and a really hot iron. (The soldering iron should not, however, be red hot).

Choke and Coil

The choke prevents radio-frequency signals passing into the headphones, so that they return through the reaction winding, thereby building up the strength of signals in the tuning coil. It can be made by gluing five cardboard washers on a tube $\frac{1}{2}$ in. in diameter, and winding the spaces full with thin insulated wire, as seen in Fig. 3. The wire should be about 36 to 42 S.W.G. in order to get several hundred turns in each section. All turns are in the same direction, and the ends are taken to the socket and terminal shown. The choke is pushed on a cork or disc screwed to the baseboard.

The coil is wound on a $1\frac{1}{2}$ in. diameter tube as follows: 84 turns of 32 S.W.G. enamelled wire, turns side by side, between (A) and (D). Loops 2 ins.

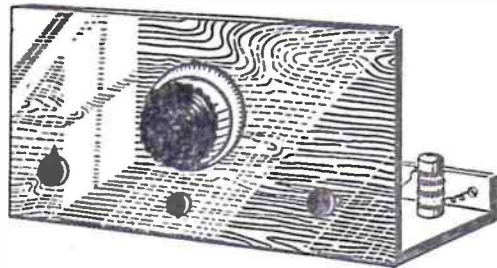


Fig. 3—Details of the valve holder and choke

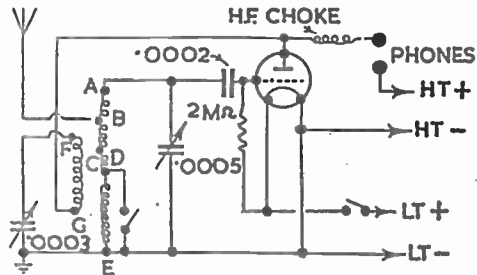


Fig. 1—The theoretical circuit

and off. A reaction condenser, with knob, is also required; a capacity of .0003 mfd. is most suitable here, though a .0005 mfd. condenser is satisfactory, if it hand.

A .0002 mfd. fixed condenser, with terminals or wire ends, is needed, and a 2 megohm grid leak. Also a 4-pin valve holder and small high frequency choke. The latter can be made as will be described.

If a crystal set is not being dismantled, a further switch will be required for wavechanging, and a .0005 mfd. tuning condenser with dial. A tube will also be needed, with wire to wind the coil.

Construction and Wiring

Fig. 2 shows all parts and wiring. The panel (of 3-ply) is about 8 ins. by 6 ins. and screwed to a baseboard of similar size, the latter being of $\frac{1}{2}$ in. wood. A terminal strip about 1 in. high, of ebonite, paxolin, or similar material, is screwed to the rear edge of the baseboard.

The ends of the coil windings can be

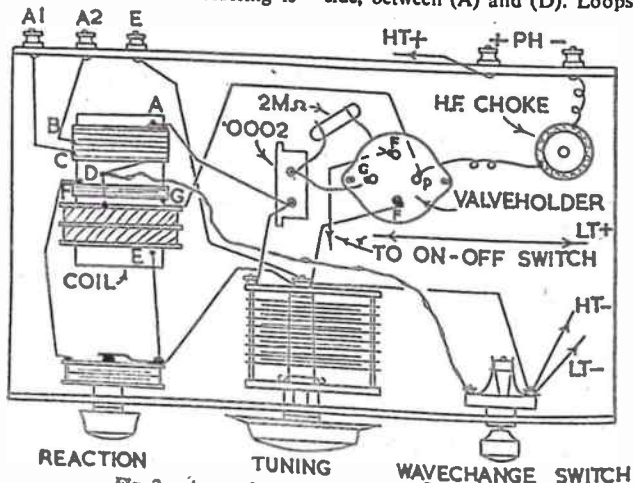


Fig. 2—A complete wiring plan of the receiver

long are formed at (B) and (C), at 30 and 60 turns respectively. An $\frac{1}{2}$ in. space is left, and the reaction winding, 60 turns of 36 S.W.G. enamelled wire, with turns side by side, is put on, its ends being (F) and (G). Immediately below this winding three cardboard discs are glued in position, with about $\frac{1}{2}$ in. space between them. These spaces are wound with 110 turns each, using the 32 S.W.G. enamelled wire (thus making 220 turns for both sections). The end of this winding forms point (E). The beginning is taken down through a small hole and twisted round lead (D).

It is permissible to vary these dimensions somewhat, or use different gauges of wire. But if this is done some experiment may be necessary in order to tune both Long and Medium Waves properly.

The ends of the windings can be secured by passing them through pairs of small holes pierced in the tube. Lead (D), which goes to the wavechange switch, consists of two wires, as explained. The completed coil is mounted on small blocks.

Using the Set

Small batteries will last a long time as current consumption is low. For high tension, a Drydex H1156 (45 volts, 5/3) or H1003 (60 volts, 6/3) battery is

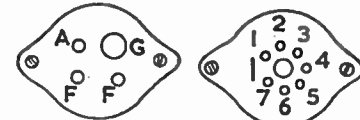


Fig. 4—Holder wiring for 'all-dry' valves

excellent. Any radio shop can obtain these with ease, if they are not in stock. For low tension, a 2 volt accumulator is required. The Exide 15-20AH type can be recommended, as it is available from ex-service stockists at 4/6. Ordinary medium or high-impedance phones are used.

The valve can be any 2 volt detector type; for example—Osram HL2, Cossor 210HF, Mazda HL2, Mullard PM1HL, etc. It should be inserted before the H.T. battery is connected, or care taken not to touch the filament pins on the plate socket.

The aerial lead-in may be taken to either terminal A1 or A2 according to

negative; 2, Plate; 3, to H.T. positive; 4, unused; 5, unused; 6, Grid; 7, to on-off switch. For type 1S5 connections are slightly different, being: 1, to L.T. negative; 2, unused; 3, unused; 4, to H.T. positive; 5, Plate; 6, Grid; 7, to switch. Note that this numbering is only correct when viewing the holders from the underside. These

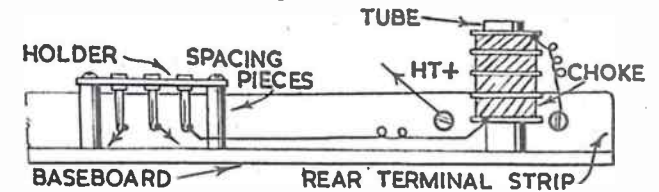


Fig. 3—Details of the valve holder and choke

which gives best results in the area where the set is used. Terminal (E) is for an Earth connection. Medium Waves will be tuned when the wavechange switch is in a closed position; Long Waves when it is open. Reaction is used to build up volume. If used with one of the small battery amplifiers recently described, good loudspeaker volume should be obtained.

'All-Dry' Operation

Some constructors may wish to avoid using an accumulator with the 1-valver. This can be done, with one of the valves already listed, by using a 3 volt flash-lamp battery, with a 10 ohm wire wound resistor in one lead to drop the excessive 1 volt.

It is also possible to use the type of valve found in 'All-Dry' portables, but these have different bases. Because of this, a different holder is required, and the two most-used types are shown in Fig. 4. The first holder is for types such as the Hivac XL1.5V, Anode, Grid, and Filament sockets being seen as viewing the holder from the underside. The second holder is for the button base glass miniatures. For type 1T4, connections are as follows: 1, to L.T.

valve types require a 1.5 V. dry cell for low tension.

Wiring in Words

As this receiver is for beginners, the constructor may like to check all his connections against the following:—

A1 to (C) on coil. A2 to (B) on coil. Earth to moving plates of tuning condenser. (A) on coil to .0002 fixed condenser and fixed plates of tuning condenser. (D) on coil to wavechange switch. (E) on coil to moving plates of reaction condenser. (G) on coil to (P) on valveholder. (F) on coil to fixed plates of reaction condenser. Moving plates of reaction condenser to moving plates of tuning condenser, also to (F) on holder, remaining contact on wavechange switch, and H.T. and L.T. negative. L.T. positive to on-off switch. Second on-off switch contact to second filament socket of holder. Grid leak to second filament socket and to .0002 fixed condenser. (P) on holder to H.F. Choke. H.F. Choke to negative phone terminal. Positive phone terminal to H.T. positive. (330)

WORKSHOP NOTES AND HINTS (3)

About Twisted Grains

THERE are some fellows working with blunt-ironed badly adjusted planes, who tear up even 'easy' woods, but even the expert is at times exasperated by the tendency of some hardwoods with highly-figured twisted grains to tear up whilst being planed. This occurs not only with fairly expensive hardwoods of twisted grain, whose awkwardness is tolerated only for the resulting 'figure' of the grain,

but also when using wood salvaged, for example, from certain packing cases. The present writer, for example, came into possession of quite a lot of oak strips that had been used for packing American tin-plate sheets. These oak strips had a very twisted grain (they were probably thrown out of a furniture, etc., factory for this reason and delegated to lowlier uses).

The old-time craftsman had, probably, a special low-angled smoothing

plane, but if the reader has an ordinary wooden smoothing plane standing idle—one that has been superseded by a metal plane, for example—the following expedient may be tried. Sharpen the cutter very carefully, making the angle a little less than usual. Then grind the edge of the cap iron until it is but $\frac{1}{4}$ in. or so. Place the cap iron very close to the cutting edge of the iron blade and, most important, tighten hard. Adjust for a fine shallow cut. Use an even pressure in planing to avoid 'chatter'. You will be surprised at the smooth way in which this plane works in comparison to the previous tearing-out of grain. (311)

Dad would like this NOVEL CIGARETTE DELIVERY BOX

ILLUSTRATED is a simple type of automatic cigarette delivery box, and it should be welcomed by those who like something novel to make up.

A view of the finished article is given in Fig. 1, while the method of working it is shown in the cross section in Fig. 2. There is a plain box-like container with lid on top for the insertion of the cigarettes. Inside the

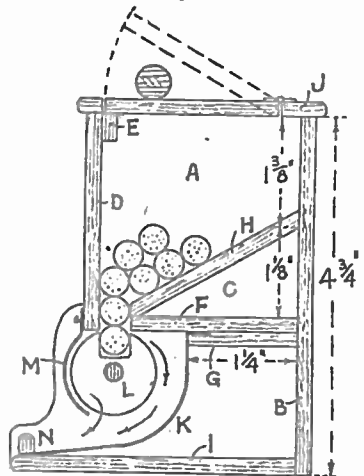


Fig. 2—How the box works

box is a sloping floor which guides the cigarettes to the front of the box where an opening is formed in the floor to allow one cigarette at a time to fall into a mechanically controlled open drum. When the wheel is turned by means of the projecting disc-handle on the out-

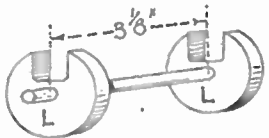


Fig. 5—The drum

side of the box, the cigarette falls from its groove on to the guide beneath, which throws it forward ready to be picked up.

It will be seen by a study of Fig. 2 that the groove into which the cigarette first falls can be turned forwards or

backwards, and the result will be the same either way. Note the arrows in the diagram Fig. 2.

The construction of the box is straightforward, but careful attention must be paid to fitting and fixing the various pieces. With the exception of the discs forming the drum, 1/4 in. wood is used throughout.

Two sides (A) must first be outlined on the wood and cut with a fine fretsaw. The measurements for draughting the outline are given in Fig. 3. Having outlined and cut one side, clean it up and lay it on a second piece of wood,

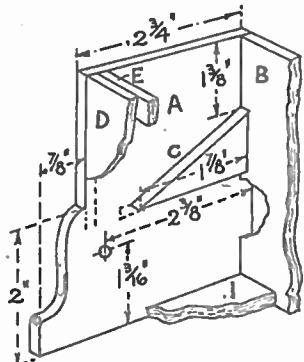


Fig. 3—Details of the sides

using it as a template for drawing round to produce the second side. The back of the box (B) is an oblong piece measuring 4 1/2 ins. by 3 1/2 ins., and it is cut and glued between the sides.

Next cut the triangular shaped pieces (C) to go on the inside of ends (A). These pieces measure 1 1/2 ins. long by 1 1/2 ins. wide, as seen in Figs. 2 and 3. Mark where the pieces (C) are to go—1 1/2 ins. down from the top edge of (A), and glue them firmly in place and square on the back.

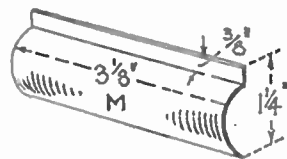


Fig. 6—Dimensions of the metal front

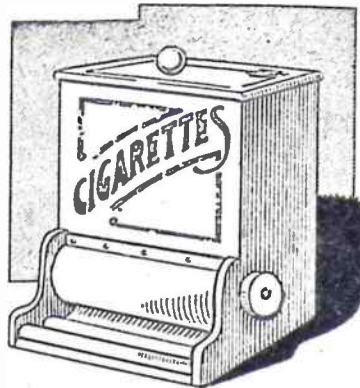


Fig. 1—The completed box

The front (D) is next cut and glued between the sides. It measures 2 1/2 ins. by 3 1/2 ins. (the grain of wood running vertically). Now cut the small rail (E) 3 1/2 ins. long and 1/2 in. wide, glue it behind the front and flush with its top edge to form a stop for the lid, as seen in Fig. 2.

The inside floor (F) is next prepared, and is 3 1/2 ins. long by 2 ins. wide. It is glued to the under edge of the triangular piece (C), and note that there must be a space of 1/2 in. between the front edge of (F) and the inner face of the front.

Piece (G) 3 1/2 ins. long and 1 1/2 ins. wide, is next cut to glue under the floor (F), its function being to hold the bent metal front (K) securely in place. It will be noted from Figs. 2 and 4, that the top edge of (K) is bent at right angles and pushed into a shallow recess formed along the front.

(Continued on page 12)

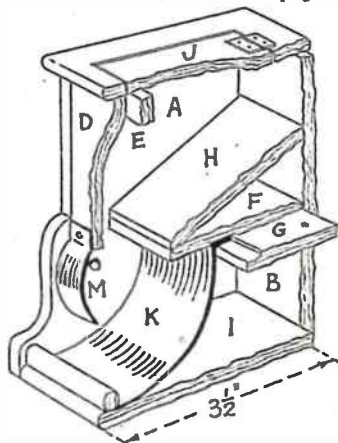


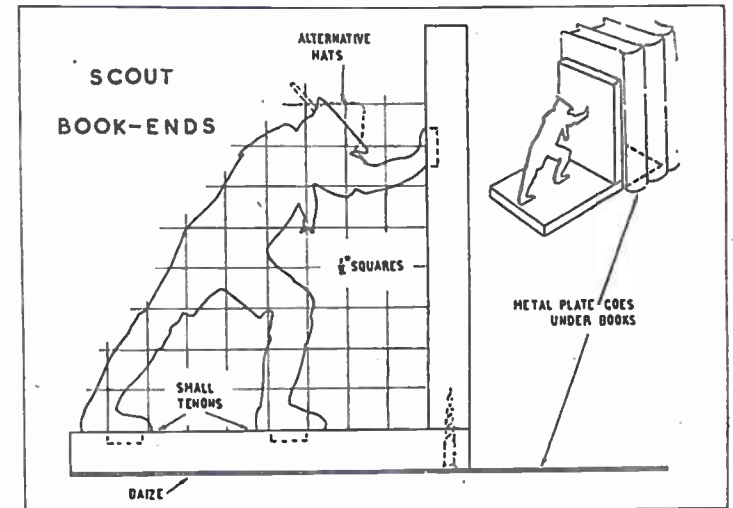
Fig. 4—Showing the inner fittings

Of particular appeal to Scouts— A Pair of Sturdy Book-ends

A PAIR of book-ends, in which the figures appear to be doing their share of the work of holding up the books, have an attractiveness all their own. These book-ends have a particular appeal to Boy Scouts, but the figures could easily be adapted to appear otherwise clothed.

Each book-end is made of two pieces of wood 5 ins. by 4 ins. by 1 in., preferably oak or beech. If any decoration is desired it should be restricted to simple bevelling of corners or chamfering of edges. Instead of relying on the weight of the book-ends themselves to prevent the books tipping, a metal plate passes under the end two or three books in the row, so that the weight of these books contributes to the steadiness of the row. The plate is a thin piece of brass or aluminium measuring 4 ins. by 3 ins. Three 1 in. or 1 1/2 in. screws pass through this and the bottom piece of wood into the upright.

The figures may be cut from 1/2 in. wood, either solid or plywood. Alternatively, they can be in 1/2 in. metal, or 1/2 in. 'Perspex' or other plastic. The narrow brim of the scout hat, shown dotted, may be a weak point in wood, but it should be safe in the other materials. The sea scout cap does not have this trouble.



For the most effective finish the figures and the plain parts should be in contrasting colours. With dark blocks, a wooden figure can be left its natural colour on the surface, but the edges painted a bright colour. Brightly coloured plastic needs dark blocks to

supplement it. The original pair of book-ends had the oak blocks stained black and the figures cut from brass and chromium plated.

If baize or felt is glued to the underside of the book-ends any tendency to slip or scratch will be reduced. (332)

THE COMPLETION OF PBK14

(Continued from page 3)

intervals, and working outward towards the ends. Hand tightness is sufficient. Work out any puckers where they occur, and keep all pulling at right-angles to the keelson. Cut off the surplus inside.

At the stem, mark the shape of the stern post against the canvas at one side, then cut about 1 in. outside this. Do the same with the other side. Cut darts in the edges to allow for turning over (Fig. 6). Bend one side over and stick to the wood with Bostik 252 or similar adhesive. Put the adhesive on both surfaces, then leave to dry before pressing together. Bend the second side over the first. Cut a piece of light fabric on the bias and stretch this to stick over the joint. The stern may be dealt with in the same way or, as it is straight, the surplus fabric may be gathered up and folded concertina-fashion over the end and nailed to the sternpost.

Fix the keel (I) and bilge keels (J) by screwing from inside. Paint the underside of these pieces and the jointing surfaces of the canvas, and screw up

while still wet.

The deck may be the same or a lighter grade of canvas. This is laid over the framework and tacked all round the gunwale (Fig. 5), then the cockpit shape is cut out and the edge tacked to the cockpit frame. Cover the joint around the gunwale with a half-round rubber strip screwed on.

If proofed canvas has been used, give the hull two coats of exterior or marine paint. If rubberized fabric has been used do not use ordinary paint. Tyre paint is a cheap paint for rubber. The deck may be left unpainted.

The coaming looks best in hardwood, varnished. Taper it from 3 1/2 ins. forward to 2 1/2 ins. aft, and cut the back of the cockpit with a curved top. Fix by screwing at about 6 in. intervals to the coaming frame. For use as a two-seater the skipper sits with his back against the rear of the cockpit, using a rest pivoting on two brackets. His mate has a cross-bar supported on two U-shaped brackets on the coaming (Fig. 7). For single-handed use the paddler sits with his back against the cross-bar brought

back to the dotted position on the General Drawing (Fig. 1). The places shown are about right, but it is wisest to locate them for the best position in any particular craft by experiment. To curve the slats, boil them for ten minutes and squeeze to shape between blocks held in a vice.

The ends may be protected and a secure attachment for the painters provided by strips of metal screwed on (Fig. 6). Brass strip about 1/2 in. by 1/2 in. section is suitable. The rope painters are spliced to these and brought back to hooks on the side of the cockpit.

Paddles should be double-bladed 7 ft. or 8 ft. long. Unless you are a skilled woodworker, it is best to buy a professionally-made paddle. If you want to make your own, details are given on the accessory drawing, as well as instructions for making rudder, sailing gear, spray covers, flag staff, paddle brackets, and trolley for transporting.

One final point: Canoes, like all craft, have to be handled properly, and beginners should practise in quiet waters until they have the feel of their charges. And, just in case of accidents, it is as well to be able to swim.



Solenoid Point Operation

CAN you advise me on the construction of a device to operate the points of our Double layout? I think it can be done with a pair of solenoids, but do not know how thick the wire should be or how many turns would be necessary. Indeed, I do not know if a solenoid will work on A.C./D.C. or D.C. only. I have ample supply of 12v. A.C. available. If D.C. is necessary, advice on how to rectify it simply would be appreciated. (A.P.—Assum).

SOLENOIDS or electro-magnets Sused on A.C. should for preference have laminated cores. Solid cores are most suitable for D.C. only. Rectifier circuits showing how D.C. models may be operated from A.C. mains have been given in past issues. A 12 volt full-wave metal rectifier of suitable current-carrying capacity is used. 20 S.W.G. wire would be average for intermittent use on a 12 V. supply. (When the points have been moved, the circuit could be interrupted). A core about 1/2 in. in diameter and 1 1/2 ins. long, with four or five layers of such wire should be suitable. If the points operate stiffly,

then thicker wire (down to 16 S.W.G. would be necessary). Undue friction should be avoided, and the core or armature which is attracted by soft iron and fairly solid. If there is danger of overloading your supply, then thinner wire would have to be used, to keep current down, and the points made to move as easily as possible.

Epidiascope Lens

I SHALL be obliged if you will kindly recommend the ideal diameter and focal length for an epidiascope lens. I am at present using a 3 1/2 in. diameter 8 in. focal length lens fitted to an epidiascope, but the subject matter is limited to about 3 1/2 ins. square for accurate focusing and projection at about 8 ft. Can you improve on this, please? (H.F.—Winchester).

FOCUS a light, say, a table lamp, through the lens until a reversed image of the light is sharply defined on the wall. The distance between lens and wall will be the focal length. Fit lens in a tube about 3 ins. long, the tube pro-

jecting 1 1/2 ins. in front of the epidiascope or thereabouts, so that the lens is distant from the picture to be projected, its actual focal length. You should then obtain a much enlarged picture on the screen, a sharply defined one being obtained by moving the lens tube in or out as necessary. Any good lens, with diameter of 2 1/2 ins. and focal length of about 7 ins. should serve.

Volume Control for Earphones

I HAVE a pair of high impedance ex-army earphones and would be glad if you could inform me whether they are suitable for use with the wireless extension speaker sockets and also what type of volume control would be suitable so that phone volume may be independent of the speaker volume. (J.G.—Reinfrew).

A VOLUME control of about 5,000 to 10,000 ohms is required. The two outer tags should be wired to the receiver. One outer tag and the centre tag is wired to the phones. The volume heard in the latter may then be independently controlled. If a mains set is used, .5 mfd. condensers may be wired in series with the leads from the receiver in order to keep mains voltages out of the phones, if the latter have bare terminals. The actual volume obtained will depend upon the type of output, of course—this can be determined by plugging the phones into the sockets available.

NOVEL CIGARETTE BOX

(Continued from page 10)

The sloping floor (H) is the next piece to be made, and is 3 1/2 ins. long and 2 1/2 ins. wide. The top edge of this piece is chamfered to 60 degrees to fit against the back of the box, while its front edge is double chamfered where it meets the front edge of floor piece (F). It rests upon, and is glued to, supports (C) on the ends.

Now the main floor of the box (I) is marked out and cut, its size being 3 1/2 ins. by 3 1/2 ins., the front edge being rounded slightly as in section, Figs. 2 and 4. It is glued in between the sides (A) and to the back (B).

We now come to the lid and its frame. A rectangle of wood measuring 3 1/2 ins. by 3 ins. is cut to outline, and a door or flap then cut from inside this (see Fig. 4). The flap is held to the frame by a pair of 1/4 in. or 1/2 in. brass hinges, and a turned knob is let into the flap for opening.

The inside back lining (K) may be formed from any suitable metal such as aluminium or thin brass. It should be

about 3 1/2 ins. long by 3 1/2 ins. wide. It is bent at right angles one end and slipped into the groove prepared for it, and then brought down in a curve, following as nearly as possible the profile shown in Fig. 2. It is then pinned neatly to the top edge of the floor where a small bead is fastened with two fine pins or nails as a 'stop' for the cigarette when it is rolled out.

The drum into which the cigarettes fall is constructed of two or three 1/2 in. thick discs (L) with notches cut out 1/2 in. square as seen in the detail Fig. 5. Holes 1/4 in. diameter are drilled in the centre of the discs through which a piece of 1/4 in. rod is passed, and to which the discs are glued. One end of the rod goes into the left hand side of the box and finishes flush on its outside surface, while to the right hand end will be attached a fret-cut disc to form a knob for turning.

For a front cover to the drum, another piece of metal is required, and this will be bent up and fixed to the

lower edge of the main front of the box as seen at (M) in Fig. 2. The length of metal will again be 3 1/2 ins. by a width of about 1 1/2 ins., this latter measurement, of course, allows for bending to the same curve as the drum itself.

The woodwork may be treated to suit the particular wood used. If mahogany, it might be stained lightly and, perhaps, brush polished, or even varnished. Then again, a light wood may have been used, especially if the word 'cigarettes' is to be included. This printing could be drawn in dark wood stain, or even in indian ink, which, in this case, should be varnished over to preserve the surface.

Before fixing the curved metal front (M), the drum at the rear of this should be well tested to see that the cigarettes drop properly from the container, and that the slots in the drum are true and catch each cigarette easily. The drum spindle should not work loosely but have sufficient 'bind' to hold it in its upright position until moved by the disc at the side. If desired, a front catch could be fitted to the lid.

(342)

YOU CAN BECOME A HANDICRAFTS INSTRUCTOR

EXPERIENCE NOT ESSENTIAL

Men who enjoy making things in wood or metal can turn their hobby into a permanent and interesting career. Short hours, long holidays, and security in a job you would really enjoy, can be yours if you become a Handicrafts instructor. Let us send details of the easiest and quickest way to get the necessary qualification.

We guarantee "NO PASS—NO FEE"

If you would like to know about our unique method of preparing you for one of these appointments, write today, and we will send you our informative 143 page Handbook—free and without obligation. Mark your letters "Handicrafts Instructor".

BRITISH INSTITUTE OF ENGINEERING TECHNOLOGY

BIET

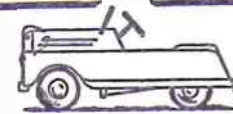
595 Shakespeare House
Stratford Place, London, W.1

PUPPETS

Kits of parts to make two Fully Jointed 12 inch puppets with controls.



15/6 post free
Send stamped addressed envelope for illustrated list of complete puppets and books



PEDAL MOTOR CAR

Any amateur can make this strong smart modern pedal car for children 2 to 5. Plan and instructions with list of available metal parts

2/6 post free

ZIMPLAN

88 WARE ROAD
HODDESDON, HERTS

5/- DEPOSIT AND PAY OFF



REAL RADIO LUXURY CRYSTAL SET Without Earphones **17/6**

Including Earphones **27/6**

FIXED DETECTOR—NO ADJUSTMENT NEEDED. Real Radio Reception—Not a Toy! Plays at once. Earphones are essential with crystal sets. Ideal for Bedrooms, Invalids, Private Listening, Radio-minded boys, etc. No Electricity, No Batteries. Works anywhere immediately. Plastic case—unbreakable. 3" x 3" x 4". Perfect Present. Radio's Finest Value—plus 1/6 post & pkg. C.O.D. 1/- extra. Refund if unsuitable or coil. **Send 3d. stamp for Clothing list.**

NEW UKELELE

Be popular everywhere. Ideal for Camps, Parties, Holidays. **WITH FREE SELF TUTOR** that teaches you to play in 1/2 hour. No musical knowledge required. **NOT A TOY—REAL MUSICAL INSTRUMENT.** For all ages. Full size as used by professionals. Strong styrene material. Nylon strings. Mellow tone. Lovely to look at. **Post & Pkg. 3/-, C.O.D. 1/- extra. Send 3d. stamp for Clothing list.**



MONTRORSE PRODUCTS (HB2), 623/7, Holloway Rd., London, N.17.

Is This Saw in Your Kit?

You can cut almost anything in wood with this Coping Saw. The blade is 6 1/2 ins. long and can be turned to cut at any angle. No tool-kit is complete without one. Get yours NOW.



6/-
Post Free

Buy from any Hobbies Branch or post free from Hobbies Ltd., Dept 99, Dereham, Norfolk

FLEXIMOULD

FOR PLASTER CASTING

WALL PLAQUES, FIGURES, GARDEN ORNAMENTS, BOOK-ENDS, ETC. MADE IN YOUR OWN HOME. THE ALL-FAMILY HOBBY THAT ADDS POUNDS TO YOUR INCOME.



Write for

FLEXIMOULD ILLUSTRATED LEAFLET to **DOHM LTD. (DEPT. H)**

167 VICTORIA ST., LONDON, S.W.1



BRANCHES
LONDON
78a New Oxford St., W.C.1
(Phone MUSEUM 2975)
87 Old Broad Street, E.C.2
(LONDON WALL 4375)
117 Walworth Road, S.E.17
(RODNEY 5509)
GLASGOW
376 Argyle Street
(Phone CENTRAL 5042)

MANCHESTER
10 Piccadilly
(Phone CENTRAL 1787)
BIRMINGHAM
14 Bull Ring
SHEFFIELD
4 St. Paul's Parade
(Phone 24071)

LEEDS
10 Queen Victoria Street
(Phone 28639)

HULL
10 Paragon Square
SOUTHAMPTON
25 Bernard Street

BRISTOL
30 Narrow Wine Street
(Phone 23744)

Head Office & Factories—HOBBIES LTD., DEREHAM, NORFOLK

NOW! YOU CAN MAKE YOUR OWN POWER TOOLS

YOUR OWN MOTORIZED WORKSHOP AT VERY LOW COST

This famous book needs little introduction. With simple plans and pictures it shows how to make all manner of Home Workshop tools and equipment. At a negligible cost you can provide yourself with a complete motorised workshop, comprising Circular, Band and Jig Saws, Lathes, Drills, Moulders, Planers, etc., etc. made mostly from scrap hardwood and easily available pipe fittings, flanges, etc. Also handtools, attachments and hints and tips. This is a **MUST BOOK** for every woodworker, experienced or inexperienced alike. 12/6 post paid.



40 NEW EDITION
Power Tools
YOU CAN MAKE

40 Power Tools
You Can Make at Little or No Cost

A. P. SUPPLIES (H), SEDGFORD, NORFOLK

J. WOTTON (Dept. H.)
140 HOLLINGS ROAD, BRADFORD, YORKS.
ALL TYPES OF MOULDS

3/- each

TOYS, ORNAMENTS, PLAQUES, ETC.

New 1952 Illustrated Catalogue. Send 6d. stamps, refunded on first order over 10/-

TWO GRAND SETS OF DESIGNS

1 A packet of accurate designs for a splendid set of miniature models of 8 ships of the Royal Navy—complete with a Naval base with berths for the ships, and all buildings. Price 1/6
2 A set of designs for Famous Aircraft of the 1939-45 War. Worthwhile souvenirs, including the Spitfire, Blenheim, Wellington, and 5 others. Price 1/-

Obtainable post free from **HOBBIES LTD. DEPT. 99, DEREHAM, NORFOLK**

FOR FACES & PLACES



You can't go wrong with Selochrome—you get a good picture every time.

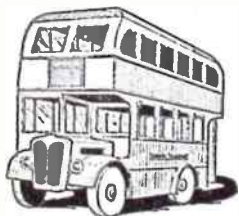
ILFORD

SELOCHROME

FILM



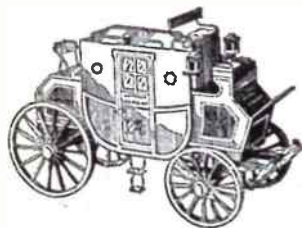
You can make them all



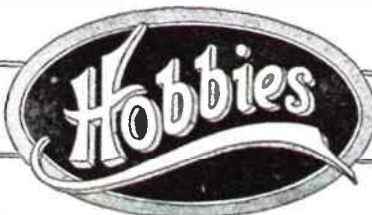
A splendid hobby. Patterns are provided for hundreds of things to make—toys, models, fretwork. With a few odd pieces of wood, or the kit provided, you can turn out lots of things; for gifts or even to sell. Any Hobbies Outfit provides all the tools.

Complete Tools Sets
Full-size Patterns
Kits of Materials

Ask for Hobbies at any stores, ironmongers or Hobbies own branches. Free illustrated leaflets from Hobbies Ltd., Dept. 99, Dereham, Norfolk.



*British
made*



*Fretwork
Outfits*